

**STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION – SAN FRANCISCO BAY REGIONAL WATER BOARD
AUGUST 21, 2018**

ITEM 3

SUBJECT

CONSIDERATION OF A PROPOSED RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE SAN FRANCISCO BAY BASIN (BASIN PLAN) TO ESTABLISH WATER QUALITY OBJECTIVES AND A TOTAL MAXIMUM DAILY LOAD (TMDL) FOR DISSOLVED OXYGEN (DO) IN SUISUN MARSH AND TO AMEND THE SAN FRANCISCO BAY MERCURY TMDL TO INCLUDE SUISUN MARSH.

DISCUSSION

The San Francisco Bay Regional Board adopted a Basin Plan amendment on April 11, 2018, with [Resolution No. R2-2018-0015](#). The amendment establishes site-specific water quality objectives for DO and a concentration-based TMDL with targets that are equivalent to the objectives. TMDL allocations and the implementation plan are designed to ensure attainment of the new DO water quality objectives. This is the first TMDL we prepared to address a DO-impaired water body in the region and the first time we developed site-specific water quality objectives for DO. Site-specific objectives are needed for the marsh because DO objectives in the Basin Plan that apply to the marsh's slough channels were developed to protect fish in open bay waters rather than in vegetated, shallow areas, such as back-end marsh sloughs, where periodic low DO conditions occur naturally.

The implementation plan requires deployment of best management practices (BMPs) at managed wetlands to reduce and/or eliminate discharges of low DO causing recurrent low DO conditions in some slough channels, mainly in the western portion of the marsh. A range of water and vegetation management practices has been tested in the west marsh over the past five years. Thus far, these early implementation actions have yielded substantial improvements in water quality. Implementation of the BMPs and DO monitoring in sloughs is a required condition of the 401 certification for Regional General Permit (RGP) issued by the U.S. Army Corps of Engineers. The RGP authorizes wetland operation and maintenance activities conducted by private landowners and Suisun Resource Conservation District, California Department of Fish and Wildlife, Department of Water Resources and U.S. Bureau of Reclamation.

The Basin Plan amendment also addresses mercury impairment in Suisun Marsh by extending the San Francisco Bay Mercury TMDL (Bay Mercury TMDL) to the marsh. The same concerns about bioaccumulation of mercury in fish, and protection of wildlife and people that drove the adoption of the San Francisco Bay Mercury TMDL in 2006 also apply to Suisun Marsh. The Basin Plan amendment extends applicability of the San Francisco Bay mercury fish tissue targets, TMDL allocations, and implementation requirements to Suisun Marsh. The mercury fish tissue targets are equally protective of human health and wildlife as the statewide water quality objectives for mercury established in 2017.

Actions to implement the Suisun Marsh DO TMDL and attain the site-specific objectives are expected to reduce methylmercury production and thus bioaccumulation of mercury in fish tissue. This is because the low DO and high organic content in Suisun Marsh create conditions that favor methylation, i.e. conversion of inorganic mercury to toxic, bioavailable methylmercury, and raising DO will mitigate these conditions, resulting in less methylation.

The Basin Plan amendment also makes non-regulatory editorial clarifications or corrections to Chapters 2 and 3 of the Basin Plan.

The scientific basis for the Suisun Marsh DO TMDL was subject to an independent, external peer review pursuant to the requirements of California Health and Safety Code section 57004. The scientific peer reviewers supported the proposed objectives, and acknowledged the scientific methods and analyses used to develop the TMDL.

The Water Board publicly noticed and distributed the proposed Basin Plan amendment, supporting draft Staff Report, and Environmental Checklist, in accordance with applicable State and federal laws and regulations. The Board Members considered these documents, as well as public comments, and staff's responses to comments, and concluded that the Basin Plan amendment will not have a significant impact on the environment.

POLICY ISSUE

Should the State Water Board approve an amendment to the San Francisco Bay Water Board's Basin Plan to establish a TMDL for dissolved oxygen for Suisun Marsh, and include Suisun Marsh in the San Francisco Bay Mercury TMDL?

FISCAL IMPACT

San Francisco Bay Regional Board staff work associated with or resulting from this action will be addressed with existing and future budgeted resources.

REGIONAL BOARD IMPACT

Adoption of this resolution will approve the amendment of the San Francisco Bay Basin Plan.

STAFF RECOMMENDATION

That the State Water Board:

1. Approve the amendment to the San Francisco Bay Basin Plan adopted by San Francisco Bay Water Board [Resolution No. R2-2018-0015](#).
2. Authorize the Executive Director or designee to submit the amendment as approved and the administrative record for this action to the Office of Administrative Law for approval and the amendment to the U.S. Environmental Protection Agency for approval.

State Water Board action on this item will assist the Water Boards in reaching Goal 1 of the Strategic Plan Update: 2008-2012 to implement strategies to fully support the beneficial uses for all 2006-listed water bodies. In particular, this item will assist in fulfilling Action 1 to prepare, adopt, and take steps to carry out Total Maximum Daily Loads (TMDLs), designed to meet water quality standards, for all impaired water bodies by 2030.